

Title (en)
CARBON FACE SEAL

Title (de)
KOHLENSTOFFOBERFLÄCHENDICHTUNG

Title (fr)
JOINT D'ÉTANCHÉITÉ À FACE EN CARBONE

Publication
EP 4191027 A1 20230607 (EN)

Application
EP 22210042 A 20221128

Priority
US 202117541593 A 20211203

Abstract (en)
An apparatus has: a first member; a shaft rotatable relative to the first member about an axis (A); and a seal system (100). The seal system has: a seal (102) carried by the first member and having a seal face (106); a seal carrier (150); a seat (104) carried by the shaft and having a seat face (108) in sliding sealing engagement with the seal face; and one or more springs (132) biasing the seal carrier relative to the first member so as to bias the seal face against the seat face. The seal carrier has: an axially-extending wall having an inner diameter (ID) surface (160); and a radially-extending wall having a first surface (158). The seal carrier axially-extending wall ID surface has a radially inwardly open groove (192) having a first sidewall and a second sidewall and a base. A wave-form split ring (190) contacts the first sidewall and biases the seal into engagement with the radial wall first surface.

IPC 8 full level
F01D 11/00 (2006.01); **F01D 25/00** (2006.01); **F01D 25/18** (2006.01); **F16J 15/34** (2006.01)

CPC (source: EP US)
F01D 11/003 (2013.01 - EP); **F01D 25/16** (2013.01 - EP); **F01D 25/183** (2013.01 - EP); **F16J 15/3452** (2013.01 - EP US); **F16J 15/3464** (2013.01 - EP); **F16J 15/348** (2013.01 - EP); **F16J 15/3488** (2013.01 - EP); **F16J 15/3496** (2013.01 - US); **F16J 15/38** (2013.01 - EP); **F01D 25/005** (2013.01 - EP); **F05D 2240/55** (2013.01 - EP); **F05D 2260/98** (2013.01 - EP)

Citation (applicant)
US 11125333 B2 20210921 - NASMAN BENJAMIN [US], et al

Citation (search report)
• [YA] US 2021332758 A1 20211028 - NASMAN BENJAMIN [US], et al
• [YA] US 6109617 A 20000829 - LANEY FREDERICK CHRISTOPHER [US]
• [YA] CN 110285219 A 20190927 - BEIJING CHANGCHENG INST METROLOGY & MEASUREMENT AVIATION IND CORP CHINA
• [Y] US 5556110 A 19960917 - MARSJ JOSEPH A [US], et al

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 4191027 A1 20230607; US 11739845 B2 20230829; US 2023175589 A1 20230608

DOCDB simple family (application)
EP 22210042 A 20221128; US 202117541593 A 20211203